



PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional) 058268.00054
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]		Application Number: 10/082,077
on _____		Filed: February 26, 2002
Signature _____		First Named Inventor: Shih-Hsiung NI
Typed or printed Name _____		Art Unit: 2616
		Examiner: Steven Blount

**Mail Stop AF**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

Applicant/Inventor.  
 assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under  
37 CFR 3.73(b) is enclosed  
 Attorney or agent of record.  
Registration No. 58,178



Signature

Peter Flanagan  
Typed or printed name

703-720-7800  
Telephone number

Attorney or agent acting under 37 CFR 1.34.  
Reg. No. is acting under 37 CFR 1.34 April 26, 2007  
Date

NOTE: Signatures of all of the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

\*Total of \_\_\_\_\_ forms are submitted.



## PATENT APPLICATION

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:  
Shih-Hsiung Ni  
Application No.: 10/082,077  
Filed: February 26, 2002

Confirmation No.: 2659  
Art Unit: 2616  
Examiner: Steven Blount  
Attorney Dkt. No.: 058268.00054

For: EFFICIENT OPTIMIZATION ALGORITHM IN MEMORY UTILIZATION FOR NETWORK APPLICATIONS

### Pre-Appeal Brief Request for Review

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

April 26, 2007

Sir:

This attachment to the Pre-Appeal Brief Request for Review sets forth clear errors in the rejections presented in the Office Action dated January 26, 2007, responded to on March 26, 2007, and maintained by an Advisory Action dated April 24, 2007.

Claims 1-56 are currently pending in the application, of which claims 1, 8, 15, 19, 23, 30-31, 35, 37, 44-45, 49, 51, 53, and 55 are independent claims.

### **Clear Error: Memory 114 is Internal not External Memory**

Claim 1 recites “a look-ahead logic module configured to select an address of a first memory bank of an external memory device.” Applicant respectfully submits that Lee fails to disclose at least this feature of the claim.

The Office Action cited scheduler 116 of Lee as corresponding to the claimed “a look-ahead logic module configured to select an address of a first memory bank of an external memory device.” Applicant respectfully submits that this rejection constitutes clear error.

Scheduler 116 is an element of system controller 100. However, the only memory addressed by system controller 100 is multibank memory 114. As can be seen from Figure 1, multibank memory 114 is not an “external” memory device; both multibank memory 114 and system controller 100 are internal parts of network processing device 90.

The Office Action's position that multibank memory 114 is external to the scheduler 116 is not a reasonable response, because one of ordinary skill in the art would understand "external" with respect to the device, not with respect to a functional block diagram of a device.

**Clear Error: Input Port 82 is either Inside or Outside the Device**

If the Office Action's position that memory 114 is external to the relevant device (namely System Controller 100 or scheduler 116) were correct, then by the same principle input port 82 would be external. Note that, in Figure 1, both memory 114 (described by the Office Action as "external") and input port 82 are part of network processing device 90. However, if the Office Action can validly assert that the memory 114 is external to the relevant device, then for consistency, the Office Action cannot simultaneously assert that the input port 82 is part of the relevant device, because input port 82 is at least as external to system controller 100 as is memory 114.

In other words, it is clear error for the Office Action both to assert that memory 114 is external, and yet to claim that input port 82 is part of the device. At least one of those characterizations must be erroneous.

**Clear Error: Free Buffer Pool 108 is not the Pointer Assignment Module**

Claim 1 also recites "a pointer assignment module, connected to the look-ahead module, is configured to include an independent link list assigned exclusively to the first memory bank and to assign a pointer to the data packet based upon the first memory bank as determined by the look-ahead logic." Applicant respectfully submits that Lee also fails to disclose or suggest at least these features.

The Office Action took the position that these features are disclosed by free buffer pool 108. Applicant respectfully submits that this characterization constitutes clear error.

Free buffer pool 108 is simply a pool of address pointers P1-P4 that identify the next available address in each of memory banks B1-B4, respectively, as described by Lee at column 3, lines 43-45. Free buffer pool 108 therefore is not configured "to include an independent link list assigned exclusively to the first memory bank" nor "to assign a pointer to the data packet based upon the first memory bank as determined by the look-ahead logic." Accordingly, free buffer pool 108 cannot correspond to the claimed "pointer assignment module."

### **Clear Error: Shifting Ground of Rejection**

This distinction had been raised in a previous response filed October 27, 2006. The Office Action responded to this distinction with what appears to be a new ground of rejection. The Office Action stated that “the scheduler acting in combination with unit 108 … provides the functional equivalent of a linked list.” Applicant notes that what has been argued is that there is nothing corresponding to the claimed “pointer assignment module … configured to include [the] independent link list.” If both unit 108 and the scheduler are part of the pointer assignment module, by virtue of corresponding to the linked list which is included in the pointer assignment module, then a new shortcoming in the rejection would arise. Claim 1 also recites that the pointer assignment module is “connected to the look-ahead module.” However, as best understood, the scheduler was previously viewed as corresponding to the claimed look-ahead module. If the scheduler is now instead in the pointer assignment module, the two are not connected but identical, and Lee cannot disclose or suggest all of the elements of the claims. Accordingly, this new ground of rejection could not establish anticipation of claim 1.

### **Clear Error: Failure to Respond to Arguments**

Certain distinctions between the claims and the cited art were presented on pages 11-13. These distinctions had been previously presented and were not rebutted in the Office Actions or Advisory Action. They were also not addressed in the Advisory Action. In light of these unrebutted distinctions, it is clear error for the rejection to be maintained.

### **Clear Error: Applicant’s Disclosure used as Motivation to Modify Cited Art**

Claims 8-11, 30, 44, and 52-56 were rejected under 35 U.S.C. 103(a) as being unpatentable over “applicants [sic] admitted prior art (AAPA)” (“the allegedly admitted prior art” or “AAPA”) in view of Lee. This rejection constitutes clearly improper hindsight reconstruction.

Even if the material cited were admitted prior art (not admitted), the Office Action would still have to provide motivation to combine, which cannot be taken from any portion of the application, including the background section. “The showing of a motivation to combine must be clear and particular, and it must be supported by actual evidence. *In re Dembiczak*, 175 F.3d

994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).” *Telflex v. Ficosa North Amer. Corp.*, 63 USPQ2d, 1374, 1387 (Fed. Cir. 2002).

Furthermore, ““The factual inquiry whether to combine references must be thorough and searching.” [McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001)] It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. *See, e.g., Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir. 2000) (“a showing of a suggestion, teaching, or motivation to combine the prior art references is an ‘essential component of an obviousness holding’”) (quoting *C.R. Bard, Inc., v. M3 Systems, Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998)); *In re Dembicza*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) (“Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.”); *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998) (there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by the applicant); *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) (“teachings of references can be combined *only* if there is some suggestion or incentive to do so.”) (emphasis in original) (quoting *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984)). The need for specificity pervades this authority. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) (“particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed”); *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) (“even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious.”); *In re Fritch*, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) (the examiner can satisfy the burden of showing obviousness of the combination “only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary

skill in the art would lead that individual to combine the relevant teachings of the references")."  
*In re Lee*, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002).

Moreover, As MPEP 2142 states "Knowledge of applicant's disclosure must be put aside in reaching this determination [of obviousness] .... The tendency to resort to "hindsight" based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art." However, in the present rejection, the attempt to meet the high standard set forth by the Federal Circuit regarding motivation to combine is based in large part on Applicant's disclosure, in direct contravention of MPEP 2142.

Thus, Applicant respectfully submits that the combination of the present application and Lee is an improper hindsight combination, which constitutes clear error and demands reversal of the rejection.

In view of any one of the various clear errors present in the rejection, it is respectfully submitted that the rejections should be reversed. Appropriate reversal is respectfully requested.

In the event this paper is not being timely filed, Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

  
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